

It is acknowledged that Applicant has disclosed information to enable one skilled in the art to make a specific crystal for the method of utilizing a crystal structure of ACPS having a RMS of 1.66Å (page 34, lines 4-21). However, the instant specification does not provide adequate disclosure for one of skill in the art to make a crystal structure of ACPS having a RMS of not more than 1.5Å, 0.5Å, or 1.0Å to practice the claimed invention. It is well known in the art (Drenth, pages 93-93) that the accuracy with which a structure can be determined depends strongly on the resolution of the diffraction pattern...

In view of these statements, and as discussed during the interview, Applicants believe there is some confusion regarding the difference between the term "resolution," as used in the Office Action, and the phrase "root mean square deviation" as recited in the claims. As explained below, these two concepts are distinct.

The claims cover methods that include obtaining the structural coordinates of crystallized ACPS or a crystallized complex containing ACPS, and generating a three dimensional model of ACPS or the complex using the structural coordinates \pm a root mean square deviation from the backbone atoms of not more than 1.5Å. As used in the claims, the term "root mean square deviation" refers to a comparison of the distance between the positions of the backbone atoms in a three dimensional model of ACPS or a complex containing ACPS and the positions of the backbone atoms provided by the structural coordinates of crystallized ACPS or a crystallized complex containing ACPS. The present application discloses the concept of root mean square deviation in the context of comparing two sets of molecular coordinates, for example, at page 34, lines 4-21. There, the discussion relates to the root mean square deviation between the molecular coordinates of ACPS and the published molecular coordinates of the protein Sfp. (Specification at page 34, lines 4-21).

In contrast, the reference to the term "resolution," as used in the Office Action, appears to relate to a measure of the quality of a crystal of a protein or protein complex, and does not refer to a property calculated when comparing two sets of molecular coordinates. Thus, Applicants believe the statements regarding "resolution" in the Office Action are not relevant to the issue of enablement of the pending claims.

During the interview, Examiner Marschel noted that the structural coordinates disclosed in Figures 1, 1A-1 to 1A-107, 2, and 2A-1 to 2A-19 lack error bars. However, Applicants do not believe that this is relevant to the issue of enablement because one skilled in the art would readily know how to compare the coordinates of the backbone atoms of a given molecular model of ACPS or an ACPS complex to the coordinates required by the claims to determine whether the root mean square deviation of the backbone atoms was not more than $\pm 1.5\text{\AA}$. For example, the application explicitly discloses how to compare atomic coordinates of two different structures and determine the root mean square deviation between the coordinates. (Id.)

In view of the foregoing, Applicants request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, first paragraph.


Applicants believe the application is in condition for allowance, which action is requested.

Enclosed is a \$950 check for a petition for an extension of time for three months. Please apply any other charges or credits to Deposit Account 06 1050, with reference to Attorney Docket No. 16163-030001.

Respectfully submitted,

Date: _____

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